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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/649,692	08/28/2000	Tyler E. Pease	141.009	8406

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EXAMINER

HORTON, YVONNE MICHELE

ART UNIT

PAPER NUMBER

3635

DATE MAILED: 03/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/649,692

Applicant(s)

PEASE, TYLER E.

Examiner

Yvonne M. Horton

Art Unit

3635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13 and 15-20 is/are allowed.
- 6) ☒ Claim(s) 1-12, 21-23 and 25-37 is/are rejected.
- 7) ☒ Claim(s) 14, 22 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Withdrawal of Allowable Subject Matter***

The indicated allowability of claims 7-0 and 27 is withdrawn in view of the newly discovered reference(s) to BELIVEAU, NOGRADI, WOOD and PORTER. Rejections based on the newly cited reference(s) follow.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-10,21,23,25-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #5,893,248 to BELIVEAU in view of either US Patent #4,961,298 to NOGRADI or US Patent #4,641,469 to WOOD and US Patent #6,205,729 to PORTER. In reference to claims 1,3,4,5,9,10,23 and 34, BELIVEAU discloses the use of an insulated wall panel (10) including a foam sheet (12) having first (16) and second (14) planar sides and first (32) and second (34) opposing edges, a first reinforcing strip (18) having a top (22) and a bottom (20,26,B), and a second reinforcing strip (19) also having a top (22) and a bottom (20,26,B) wherein the first (18) and second (19) reinforcing strips are oriented within only one face (16) of the panel (10) and extend substantially the entire length of the panel (10). BELIVEAU discloses the basic claimed insulated panel except for the foam sheet having grooves and except for the use of thin reinforcing layers. Both NOGRADI and WOOD teaches that it is known

in the art to provide a foam sheet (10) with grooves (14) and (12); respectively, to accommodate reinforcing strips (12) and (20). And, PORTER teaches that it is known in the art to provide an insulated foam panel (10) having reinforcing strips (63,92,94,110,112,150a,150b,152b,152c,etc) embedded therein with a thin reinforcing layer (22,46,70,75,88,116,140,206). Hence, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the planar sides of BELIVEAU with the grooves of either NOGRADI or WOOD; and to also provide the panel of BELIVEAU with the thin reinforcing layer of PORTER in order to create an insulated panel wherein the reinforcing member can be easily embedded and maintained therein while also having an insulated panel that is strong, durable, and moisture resistant. Providing the foam sheet with grooves allows for easy installation and removal of the reinforcing members without having to force the members within the foam sheet thereby increasing the chance of damaging the sheet prior to use. The panel of BELIVEAU is a ceiling type panel. Hence, the use of a reinforcing strip therewith improves the panel's ability to resist moisture therethrough especially in cases where the panel might be used in high moisture or water traffic areas. Although PORTER only requires the use of one reinforcing layer to one side of his panel, it would have also been obvious to one having ordinary skill in the art at the time the invention was made to provide the panel of BELIVEAU with thin reinforcing layers on both sides of the panel, since the mere duplication of essential working parts of an invention involves only routine skill in the art. An additional layer would merely further reinforce the panel's ability to resist moisture, except for now on both major faces. Thus the

panel is equipped to combat moisture attempting to inhibit it from both sides. Regarding claim 2 and in further regards to claims 3-5 and 9, the reinforcing strips (18,19) of BELIVEAU includes two downwardly extending flanges (24) extending perpendicularly to the first planar side (14). Additionally, in reference to claim 3, the first (18) and second (19) reinforcing strips are mechanically textured, as at (30), over it's length. Further regarding claims 4,5 and 37, NOGRADI teaches that it is known in the art to provide a top (22) of the reinforcing strip (12) with a plurality of spaced holes (16). It would have also been obvious to one having ordinary skill in the art at the time the invention was made to provide the reinforcing members of BELIVEAU with a plurality of spaced holes, as taught by NOGRADI, in order to give the panel a means for ventilation or a means for attachment to a secondary member such as a wall. Regarding claim 5, although NOGRADI does not teach the use of slots, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the apertures as slots. Slots allow for a greater mount of adjustability if being used with fasteners. If the slots are used for ventilation purposes, more moisture will be able to be ventilated through the slots. In reference to claims 6,7,9 and 10, the first and second thin reinforcing layers (22) of PORTER forms a first and a second vapor barrier across the entire first (16) and second (14) sides of the panel, column 3, lines 30-31. Regarding claims 8-10, the foam sheet (10) of BELIVEAU is polystyrene or polyethylene and the tensile strength is not disclosed. However, the tensile strength of either polystyrene or polyethylene is low considering the fact that foams are compressible to a certain extent. The reinforcing layer of PORTER has a tensile strength equal to that of oriented strand

Art Unit: 3635

board. Hence, it would have been obvious to one having ordinary skill in the art at the time the invention was made that the tensile strength of the reinforcing layer is much more than the tensile strength of the foam sheet. Although it is not clear if the tensile strength of the reinforcing layer is 100 times more than the tensile strength of the foam sheet, it is still obvious that the tensile strength of the reinforcing layer is greater. The desired multiple of greatness of strength of one member over the other is an obvious matter of design choice that depends heavily on the types of material used to form each member. Regarding claims 21,23,25-27,35 and 36, the reinforcing strips (18,19) of BELIVEAU include a first portion or centrally recessed portion (30) recessed below the planar surface (16) of the foam sheet (10), a second portion or non-recessed portions (22) coplanar with the planar surface (16) that flank the first/centrally recessed/surface textured portion/apertured portion (30) that receives the heads of fasteners (not shown), column 3, lines 33-35. In reference to claim 28, the first (18) and second (19) reinforcing strips are opposite the first planar side (14) wherein the first planar side (14) has no reinforcing strips. Regarding claims 29-32, BELIVEAU is silent with regards to the spacing of the reinforcing strips. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to specify a particular distance between reinforcing members and between the reinforcing member and the panel edge that is suitable for the use intended as an obvious matter of design choice. For instance, a large panel might need the reinforcing strips to be spaced closer together in order to ensure rigidity and a strengthened panel that will not tilt upon assembly; whereas a smaller panel might space the reinforcing strips further apart

because the panel may need less reinforcement. In reference to claim 33, the reinforcing layers (22) of PORTER are primarily plastic impregnated paper sheets.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #5,893,248 to BELIVEAU in view of either US Patent #4,961,298 to NOGRADI or US Patent #4,641,469 to WOOD and US Patent #6,205,729 to PORTER. BELIVEAU discloses the method of manufacturing an insulated wall including the steps of creating a rigid foam block (10) having first (16) and second (14) opposing sides; and inserting a reinforcing strip (18,19) that is mechanically textured, as at (30). BELIVEAU discloses the basic claimed method except for cutting the board to form sheets with recesses on only one side, and except for covering the reinforcing strips with a thin reinforcing layer and bonding the reinforcing layer to the first side of the foam sheet. In regards to cutting the board, none of the reference actually disclose cutting the board; however, it would have been obvious to one having ordinary skill in the art that the foam board would have to cut in order to form the smaller individual foam sheets. In reference to cutting or forming the recesses, both NOGRADI and WOOD teaches that it is known in the art to cut recesses (14) and (12); respectively, in the foam sheets (10). Regarding covering the reinforcing strips disposed on the first side of each foam sheet with a reinforcing layer, PORTER teaches that it is known in the art to cover the tops of reinforcing strips (63,92,94,110,112,150a,150b,152b,152c,etc) embedded within one side of a foam sheet (12) with a reinforcing layer (22,46,70,75,88,116,140,206) by bonding the reinforcing layer (22,46,70,75,88,116,140,206) to a top of the reinforcing strip (63,92,94,110,112,150a,150b,152b,152c,etc), column 4, lines 33-47. Hence, it

would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of BELIVEAU to include the steps of cutting a recess, as taught by both NOGRADI and WOOD, and to include the step of covering the reinforcing strip and first side of the foam sheet with a reinforcing layer, as taught by PORTER in order to create an insulated panel wherein the reinforcing member can be easily embedded and maintained therein while also having an insulated panel that is strong, durable, and moisture resistant. Providing the foam sheet with grooves allows for easy installation and removal of the reinforcing members without having to force the members within the foam sheet thereby increasing the chance of damaging the sheet prior to use. The panel of BELIVEAU is a ceiling type panel. Hence, the use of a reinforcing strip therewith improves the panel's ability to resist moisture therethrough especially in cases where the panel might be used in high moisture or water traffic areas. Also, BELIVEAU does not teach the use of holes on a top of the reinforcing strip, NOGRADI teaches that it is known in the art to provide a top (22) of the reinforcing strip (12) with a plurality of spaced holes (16). It too would have also been obvious to one having ordinary skill in the art at the time the invention was made to provide the reinforcing members of BELIVEAU with a plurality of spaced holes, as taught by NOGRADI, in order to give the panel a means for ventilation or a means for attachment to a secondary member such as a wall. Regarding claim 12, although PORTER only requires the use of one reinforcing layer to one side of his panel, it would have also been obvious to one having ordinary skill in the art at the time the invention was made to provide the panel of BELIVEAU with thin reinforcing layers on both sides of the panel,



since the mere duplication of essential working parts of an invention involves only routine skill in the art. An additional layer would merely further reinforce the panel's ability to resist moisture, except for now on both major faces. Thus the panel is equipped to combat moisture attempting to inhibit it from both sides.

***Allowable Subject Matter***

Claim 13 and 16-20 remain as being allowed.

Claims 14,22 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

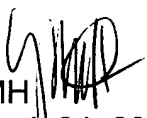
Applicant's arguments with respect to claims 1-3,6,25,26 and 28-33 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvonne M. Horton whose telephone number is (703) 308-1909. The examiner can normally be reached on 6:30 am - 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl D. Friedman can be reached on (703) 308-0839. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3635

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
YMH  
March 24, 2004